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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,850	07/25/2001	Ikuo Aoki	1293.1228	3894

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 07/14/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/911,850

Applicant(s)

AOKI, IKUO

Examiner

Jorge L Ortiz-Criado

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-16,18-22,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-16,18-22,24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 8-16, 18-22, 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki, Japanese Publication No. 2000-195060.

Regarding claim 1, Aoki discloses an optical disc, comprising:

track grooves formed in a radial direction of the disc, with the disc being divided into a plurality of zones (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2),

wherein the track grooves are formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, to record zone address information for each of the divided zones based on a predetermined modulation rule, wherein each zone has a recording capacity in which an arbitrary recording capacity is added to a data recording capacity needed for each divided zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2,5), and

Art Unit: 2655

wherein an arbitrary area at an inner and/or outer circumferences in each zone has a coupling area separate from a user data recording area (See Detailed description paragraphs [0028]-[0030]; Drawings 5- "ID separate from the DATA" , in each m-1,m, and m+1 zones etc.), and

wherein, during recording of the user data, in each zone an arbitrary zone start pattern and/or zone end pattern is additionally recorded (See Detailed description paragraphs [0028]-[0030]; Drawings 5, "Address information of the zone")

Regarding claim 3, Aoki discloses wherein the coupling area has a predetermined pattern (See Detailed description paragraphs [0028]-[0030]; Drawings 5- "ID section separate from the DATA", in each m-1, m, and m+1 zones", predetermined information recorded in the ID section)

Regarding claim 8, Aoki discloses wherein the optical disc is a DVD-RAM disc (See Detailed description paragraphs [002]-[008], [0013-[0015]; Drawings 1,2,5)

Regarding claim 9, Aoki discloses wherein each zone has a plurality of sectors (See Detailed description paragraphs [002]-[008], [0013-[0015]; Drawings 1,2,5)

Regarding claim 10, Aoki discloses wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address (See Detailed description paragraphs [002]-[008], [0013-[0015]; Drawings 1,2,5)

Art Unit: 2655

Regarding claim 11, Aoki discloses an optical disc, comprising:

a plurality of tracks formed in a spiral direction of the optical disc, each track having at least a groove portion (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2); and

a plurality of zones, each zone including a predetermined number of the plurality of tracks and an arbitrary area at an inner and/or outer circumference of each zone, separate from a user data recording area of each zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1, 2, 5-“ID section separate from the DATA” , in each m-1,m, and m+1 zones etc.),

wherein the optical disc is formatted to include zone addresses for each zone by formatting a portion of the corresponding zone track grooves, in each zone, to include a wobble pattern based on a predetermined modulation rule, and wherein, during recording of user data, in each zone an arbitrary zone start pattern and/or zone end pattern is additionally recorded (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5, “Address information of the zone”)

Regarding claim 12, Aoki discloses wherein each track further includes a land portion (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2)

Regarding claim 13, Aoki discloses wherein land and groove recording and reproduction is possible, respectively, to and from more than one spiral of the optical disc See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2)

Art Unit: 2655

Regarding claim 14, Aoki discloses wherein the optical disc is a DVD-RAM disc (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 15, Aoki discloses wherein each zone further includes a coupling areas, with the coupling area being in the inner and/or outer circumference of the corresponding zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1, 2, 5-“ID section separate from the DATA”, in each m-1, m, and m+1 zones etc.)

Regarding claim 16, Aoki discloses wherein a predetermined pattern is recorded in the coupling area, with the pattern being based on a recording or reproduction system to perform recording or reproduction, respectively, to or from the optical disc (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5, “Address information of the zone”)

Regarding claim 18, wherein the predetermined modulation rule is one of an FM modulation, an AM modulation, and a PM modulation (Inherently to Aoki)

Regarding claim 19, Aoki discloses wherein the predetermined number of the plurality of tracks for each zone is based upon the data recording capacity needed for each zone plus an arbitrary recording capacity (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5-“Data Area plus ID area”)

Regarding claim 20, Aoki discloses wherein the arbitrary recording capacity is a coupling area (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5-“ ID area”)

Regarding claim 21, Aoki discloses wherein each zone has a plurality of sectors (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 22, Aoki discloses wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 24, Aoki discloses a method of recording data on an optical disc, comprising:

dividing the optical disc into a plurality of zones; formatting a zone address portion of one of the zones to include a wobble pattern based on a predetermined modulation rule and corresponding to an address of the zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2),

recording user data in a user data portion of the zone; and recording a predetermined pattern in an additional coupling portion of the zone, after the recording of user data (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5-“Data Area plus ID area”)

Art Unit: 2655

Regarding claim 25, Aoki discloses a method of recording data on an optical disc, comprising:

dividing the optical disc into a plurality of zones; formatting a zone address portion of one of the zones to include a wobble pattern based on a predetermined modulation rule and corresponding to an address of the zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2); and

recording user data in a user data portion of the zone, including recording of a zone start position, then recording of the user data, then recording of a zone end position (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5-“start zone area “m-1”, then DATA area of zone “m-1” then end of zone m-1, then start of zone “m”, then DATA area then end of zone “m”, then start zone “m+1”...)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki, Japanese Publication No. 2000-195060 in view of Maeda U.S. Patent No. 6,028,828.

Aoki discloses all the limitations based on claim 1 as outlined above. Aoki further discloses wherein, when data is recorded or reproduced at both sides of a land portion and a groove portion formed by one of the track grooves (See Detailed description paragraphs [002]-[008], [0013-[0015]; Drawings 1,2,5)

Aoki does not expressly disclose the sequence in recording or reproduction of data in each zone is performed according to a following sequence: after recording or reproduction at a groove/land portion in each zone is completed, recording or reproduction at the land/groove portion is performed.

However, this feature is well known in the art as evidenced by Maeda, which discloses which discloses having a disk divided into a plurality of zones forming track grooves formed in a radial direction of the disc wherein the track grooves are formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, to record zone address information for each of the divided zones based on a predetermined modulation rule (See col. 3, lines 39-44; col. 8, line 63-to col. 9, line 25; col. 10, lines 36-42; Figs. 6,7,8,14) and wherein a sequence in recording or reproduction of data in each zone is performed according to a following sequence: after recording or reproduction at a groove/land portion in each zone is completed, recording or reproduction at the land/groove portion is performed (See col. 21, lines 8-26; Fig. 25)

It would have been obvious to one with ordinary skill in the art at the time of the invention to perform the sequence of recording/reproducing of data in each zone by after recording or reproduction at a groove/land portion in each zone is completed, recording or reproduction at the land/groove portion is performed, in order to avoid switching-over a groove

Art Unit: 2655

to a land or a land to a groove and allow continuous recording/reproduction and saving the time taken for switching-over operation, as suggested by Maeda.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Japanese Publication No. 2000-113465 to Aoki, which discloses track grooves formed in a radial direction of the disc, with the disc being divided into a plurality of zones, wherein the track grooves are formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, to record zone address information for each of the divided zones based on a predetermined modulation rule, wherein each zone has a recording capacity in which an arbitrary recording capacity is added to a data recording capacity needed for each divided zone.

b. Japanese Publication No. 10-134357 to Eguchi et al., which discloses track grooves formed in a radial direction of the disc, with the disc being divided into a plurality of zones, wherein the track grooves are formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, to record zone address information for each of the divided zones based on a predetermined modulation rule, wherein each zone has a recording capacity in which an arbitrary recording capacity is added to a data recording capacity needed for each divided zone.

Art Unit: 2655

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3, 6-16, 18-22, and 24-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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W. R. YOUNG
PRIMARY EXAMINER